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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Monthly Report of Activities
Air Quality Bureau

April, 1978

STATE DOCUMENTS COLLECTION

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1. Highlights:

The month of experimental open burning in Flathead County was completed. 2,038 new permits and 244 renewals were issued.

2. Ambient Air Quality Network:

a. Standards Exceeded

SO_2 Violations

Helena Area	Microwave	East Station	Broudy
State 1-hour	0	0	0
State 24-hour	0	0	0
Federal 3-hour	0	0	0
Federal 24-hour	0	0	0

Butte-Anaconda	Hiway Jct.	Mill Creek	Lincoln School
# excur.	17	58	22
Highest 24-hour	0.31ppm	1.40 ppm	1.26 ppm
Highest 1-hour	1.40 ppm	1.88 ppm	1.21 ppm

ASARCO, Inc. - Federal 3-hour ambient air standard violation of 0.55 ppm

Hi-Vol Standards Exceeded	Date	City	Station	150 ug/m^3 Fed. Std.	200 ug/m^3 St. Std.
	4/8	Col. Falls	Anders	328	328
	4/26	Col. Falls	Anders	159	---
	4/8	Libby	Brown	170	---
	4/8	Troy	Brown	166	---

CO and/or THC	Alpine West	Hebgan Park
Highest 24-hour	1.5 ppm	0.17 ppm
Highest 1-hour	2.0 ppm	0.28 ppm

Hebgen Park	NO_2	O_3
Highest 1-hour	0.30 ppm	0.25 ppm
Highest 24-hour	0.01 ppm	0.05 ppm

SO_2 violations near Anaconda smelter

State 1-hour	31
State 24-hour	5
Federal 24-hour	3
Federal 3-hour	2

2. Ambient Air Quality Network, cont.

b. Air Stagnation Advisories

None in April

c. Laboratory Status

Total Determinations for Month	381
Total Samples for Month	185

d. Other Developments

Two new chemists were hired on contract for the MAPS project.

3. Permits and Tax Credits:

a. Construction Permits, Applied for

R. J. Studer and Sons, Stillwater Co., portable crushing plant
Baltrusch Construction, Gallatin Co., hot mix plant
Baltrusch Construction, Gallatin Co., gravel crusher
Baltrusch Construction, Lake Co., asphalt plant
Baltrusch Construction, Lake Co., gravel crusher
Department of Highways, Sweet Grass, Gallatin, Madison, Park Counties, hot mix plants
Hilde Construction, Rosebud Co., gravel crusher and hot mix plant
Zook Brothers, Lewis and Clark, gravel crushing plant
Zook Brothers, Lewis and Clark, hot mix plant
Department of Highways, Big Horn Co., asphalt plant

Approved:

R. J. Studer, Stillwater Co., portable hot mix asphalt plant
Jim Gilman Excavating, Silver Bow, hot mix asphalt plant
R. J. Studer, Stillwater Co., portable crushing plant
Exxon, East of Billings, equipment to recover vaccuum pipestill hydrocarbon gases in recovery unit

c. Tax Credits

Anaconda Aluminum Co., Columbia Falls, dry scrubbers and portions of Sumitomo project certified as air pollution control equipment

4. Variance Status:

a. Current

Anaconda Aluminum Co., Columbia Falls, F^- and particulate, expires June 30, 1978

The SO_2 variance for The Anaconda Company was renewed and expires June 30, 1978

4. Variance Status, Current, Cont.

The variance from the visible emissions and process weight rules for The Anaconda Company foundry expires on June 30, 1978.

Anaconda's application for a variance from the visibility rule for the smelter has not been scheduled.

b. New

None

5. Enforcement Actions:

a. Citations

Heritage Simmental, Three Forks, MT, 780418-HK-1, chicken manure dryer operating in violation of rule 16-2.14(1)-S1400 (Permits).

b. Notice of Violations - None

c. Order for Corrective Action - None

d. Court Action - None

6. Tepee Burner and Open Burning:

No. at start	41
New starts	0
Shutdowns	0
No. at end	41

Open burning permits

Kalispell Office	2038	Sanders County	138
Cascade County	53	Yellowstone County	347
Lake County	190	Rest of State	1851
Missoula County	362	Total Permits	4999

7. Source Tests Performed:

a. Agency - None

b. Non-Agency

Hoerner-Waldorf, Missoula, sixteen particulate tests on recovery boilers, lime kilns, smelt tanks, hog fuel boiler

NO_x and CO_2 source tests performed on Colstrip Unit No. 1 by York Research. The purpose was to check accuracy of monitors in order to fulfill specifications for monitors as specified in Federal Register dated October 6, 1975.

8. Field Investigations:

Philips Petroleum, Great Falls, refinery, inspection
Heritage Simmental, Three Forks, chicken manure dryer, no valid permit, further action pending
Colstrip Unit No. 1, Colstrip, inspection
Corette plant, Billings, O_2 and SO_2 monitors, inspection
Texaco Gas Treatment Plant, Rudyard, inspection
American Asphalt, Kalispell, documentation
Jack McDonald, Lakeside, conference regarding startup of old Kennedy Mill

9. Complaints:

Neise residence, Kalispell, barrel burning, recommended discontinuance
Robert Shoop, Laispell, burning at night, corrected
Fred Button, Whitefish, burning of plastic, no evidence found
Unpaved roads, West Yellowstone, dust, investigation
Valley Center Road, Bozeman-Belgrade, dust, investigation
Great Western Sugar, Billings, odor from ponds, (3 complaints)
D & H Oil Field Service, Inc., Glendive, dust from sandblasting, county sanitarian still investigating
Montana Merchandising, Great Falls, noise, dust and diesel exhaust, under investigation
Heritage Simmental, Three Forks, odor, citation issued
Landfill dump, Baker, openburning, referred to Solid Waste Bureau
Williams Motor Co., Glendive, paint fume odor, referred to county sanitarian

10. Data Processing Services:

a. Ambient Data Summary - Attached

b. Emission Inventory Status - No updated received

c. Prevention of Signficiant Deterioration - No significant activities

d. Modeling - No significant activities

11. Environmental Impact Statements:

a. Agency Impact Determinations - None

b. Other Agency EIS's Reviewed

Department of Natural Resources has asked for budget requests from various agencies involved in Northern Tier Pipeline.

12. Status of Studies, Contracts and Reports:

ASARCO-Troy, contract extension requested and granted to August 31, 1978. Data collection is continuing.

Annual report of the Air Quality Bureau was completed; distribution should be completed in May.

12. Status of Studies, Contracts and Reports, cont.

Poplar River Study continuing, additional equipment has been installed.

Anaconda Upper Air Study is partially operating.

Flathead Environmental Study has been funded for the first year and equipment has been ordered. Project should begin June 1.

Columbia Falls Meteorological Study final data collection is expected to be June 1.

Quality Assurance plan has been written for pulmonary function testing for MAPS.

MAPS Emission Inventory Update and Improvement - MRI has spent considerable time sampling for use in developing emission factors.

Rockwell International contract proposal to evaluate Anaconda's in-stack instruments will be updated soon.

EPA studies of Anaconda's baghouse efficiency and the helicopter sampling program should be released soon.

13. Schools and Training:

Smoke School was held April 11, 12 and 25. Equipment malfunctioned and the course was not completed.

USFS Region I Fuels Management Workshop, Missoula, April 18-20, 1978.

One-day seminar on coal beneficiation attended in Denver.

14. Public Hearings and Meetings:

a. Public Hearings Held

Flathead River Basin Study meetings in Polson and Kalispell.

Acoustic Radar chart interpretation course held in Helena and presented by Aerovironment, Inc.

Board of Health and Environmental Sciences met to discuss construction permit for Colstrip Units 3 and 4. Permit with conditions was granted.

b. Meetings Attended:

Highway Department, Helena, to discuss status of five batch plants. All plants must meet NSPS.

Stauffer Chemical, Butte, discuss implementation of Fluoride Contingency plan as condition of their Board Order.

ASARCO, Helena, discuss acid plant study, tree damage in Saddle Mountain area and lead poisoning of cattle at Cory Ranch.

14. Public Meetings, cont.

Missoula County Health Officer, Helena, Memorandum of Agreement for SIP.

Yellowstone Planning Board and Federal Highway, Helena, Memorandum of Agreement for SIP.

Missoula County Air Pollution Control, Memorandum of Agreement for Missoula County.

Cascade County Health Department, Helena, contract for local program.

Department of Administration, Helena, data processing system.

County Health officials, Butte, MAPS

Lewis and Clark Sheriff, Helena, open burning

Met with officials of Colorado State University to discuss monitoring on Crow Indian Reservation.

Talked to Nevada Resources, Inc., regarding permit requirements for lime kiln at Garrison

Exxon, Billings, to discuss particulate emission problem with fluid coker

Westmoreland Resources, Helena, discuss permit applications for boilers and coal handling facility

Anaconda Company personnel, Helena, plans for additional SO_2 control

c. Intra-staff meetings

Staff meetings
SIP revision process meetings
Small sawmill waste disposal meeting
MAPS weekly meetings on progress
MAAQS weekly meetings on progress of study

15. Public Information Requests;

Rules	7
Clean Air Act	5
General	12

16. NA

17. Other:

Engineer was hired to fill vacancy in Billings regional office.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

March 1978

Pollutant: Miscellaneous Indicators Units:

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Fluoride Papers	- Mg/sq cm/30 days					
144	Dehlbons Mt Box Flathead Co.	1.020	1.200	1.610	1.103	3	
	Anaconda South Flathead Co.	12.400	12.760	27.480	11.380	3	
	Glacier Park #1 Glac.Nat.Park	0.640	0.640	0.640	0.410	3	
	Glacier Park #2 Glac.Nat.Park	0.550	0.550	0.580	0.300	3	
	Glacier Park #9 Glac.Nat.Park	0.720	0.720	0.720	0.513	3	
	Fluoride Plates	- Mg/sq cm/30 days					
144	Anaconda South Flathead Co.	46.670	22.990	37.850	19.820	3	
	Trailer-NAAC Flathead Co.	0.980	1.610	2.000	1.393	3	
	Glacier Park #1 Glac.Nat.Park	-----	-----	***--	-----	-----	
	Glacier Park #2 Glac.Nat.Park	0.690	0.690	0.700	0.373	3	
	Glacier Park #9 Glac,Nat.Park	0.670	0.670	0.670	0.443	3	

*** - Data unavailable at time of report

Pollutant: Miscellaneous Bubbler Data Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Sulfur Dioxide						
140	Lockwood School Billings	-----	-----	***---	-----	-----	
143	Scobey						
	Daniels Co.	0.0	0.0	0.0	0.0	3	
	Fort Peck McCone Co.	0.0	0.0	0.0	0.0	3	
	Lame Deer Rosebud Co.	-----	-----	***---	-----	-----	
	Nitrogen Dioxide						
143	Scobey						
	Daniels Co.	-----	-----	***---	-----	-----	
	Fort Peck McCone Co.	-----	-----	***---	-----	-----	
	Lamo Deer Rosebud Co.	-----	-----	***---	-----	-----	

** - No samples submitted

* - Site no longer in operation

Pollutant: Miscellaneous Indicators Units

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Dustfall - tons/	sq. mi.					
141	Mountain States Great Falls	-----	-----	***---	-----	-----	
	Fire Sta #1 Great Falls	-----	-----	***---	-----	-----	
	Fairgrounds Great Falls	-----	-----	***---	-----	-----	
	Sulfation Rate -	mg O_3/100 sq cm					
140	378 mi NE Coop Billings	3.080	3.340	4.350	3.067	3	
	E. of Laurel Billings	2.200	2.800	2.800	2.500	2	
	Hi-Ball Trucking Billings	1.320	1.890	1.890	1.373	3	
141	Stock Car Track Great Falls	-----	-----	***---	-----	-----	
	Phillips Ref NI Great Falls	-----	-----	***---	-----	-----	
	Phillips Ref E Great Falls	-----	-----	***---	-----	-----	
142	Microwave East Helena	0.180	0.400	0.600	0.210	3	
	212 E. Pacific East Helena	0.220	0.400	1.170	0.310	2	
	East Stack Stu Each Helena	0.320	0.590	1.060	0.380	3	
	Brudy Ranch East Helena	0.160	0.460	0.480	0.287	3	
	525 Prickly Pear East Helena	-----	-----	***---	-----	-----	

*** - Data unavailable at time of report

Pollutant: Total Suspended Particulate Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
140	Morton-Decker Big Horn Co.	75	209	209	65.8	3	
	Warren Ranch Big Horn Co.	27	28	108	14.2	3	
	Lockwood School Billings	-----	-----	****--	-----	-----	
	KOIL Billings	-----	-----	****--	-----	-----	
	City Hall Billings	-----	-----	****--	-----	-----	
	Grand Ave.Sch. Billings	-----	-----	****--	-----	-----	
	Laurel Jr. High Laurel	-----	-----	****--	-----	-----	
141	Hospital Roof Great Falls	-----	-----	***---	-----	-----	
	Fire Sta. #1 Great Falls	-----	-----	***---	-----	-----	
	10th Ave. So. Great Falls	-----	-----	***---	-----	-----	
142	HiWay Jct. Anaconda	94	94	161	34.9	3	
	McKinley Res Granite Co.	267	267	267	62.2	3	1 exc. Fed.Pri.
	Greeley School Butte	195	195	233	96.7	3	2 exc Fed.Pri.S
	Gilman Constr. Butte	118	139	297	67.2	3	

**** - Data submitted incorrect due to improper calculation procedures January and February data also incorrect.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

March 1978

Pollutant: TSP Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
142	Atkins Res. Kalkerville	60	60	107	30.5	3	
	Richer Res. Sil.Bow Co.	39	53	53	22.1	3	
	Tierney Res. Sil.Bow Co.	43	68	89	27.5	3	
	Microwave Jefferson Co.	40	52	103	20.2	3	
	212 E. Pacific Lewis & Clk Co.	163	163	192	81.3	3	
	Kober Res. Three Forks	226	226	309	55.4	3	1 exc.Mt.Pri.St.
	Cogswell Bldg. Helena	234	234	234	71.3	3	
143	Littlefield Hill Miles City			*			
	Glendive Dawson Co.			**			
	Lame Deer Rosebud Co.			**			
	Fort Peck McCone Co.	8	13	88	6.7	3	
	Broadus Powder Riv.Co			**			
	BM Site Colstrip			**			
	Border Site Scobey	6	22	107	9.9	3	

Pollutant: TSP Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
144	Anders Res. Col. Falls	426	426	467	139.5	3	3 exc Fed Pri
	Courthouse Roof Missoula	390	390	390	123.0	3	4 exc Fed Pri 1exc Fed Sec
	Courthouse Lawn Missoula	457	457	457	144.7	3	7 exc Fed Pri 2exc Fed Sec
	Lion's Park Missoula	676	676	676	170.5	3	1exc Mt Pri 8 exc Fed Pri
	JB Field Missoula Co.	151	154	180	60.6	3	2exc Fed Sec 1 exc Fed Sec
	Hoerner Kald.#1 Missoula Co.	77	144	255	40.7	3	
	Hoerner Kald.#2 Missoula Co.	81	135	255	41.1	3	
	Hoerner Kald.#3 Missoula Co.	58	86	86	27.9	3	
	Kalispell Flathead Co.	272	272	272	85.6	3	1 exc Fed Pri 3 exc Fed Sec
	Troy-Brown Lincoln Co.	247	247	247	88.7	3	1 exc Fed Pri 3 exc Fed Sec.
	Troy-Sampson Lincoln Co.	17	29	171	12.4	3	
	Libby-Brown Lincoln Co.	341	394	394	154.8	3	2 exc Fed Pri 5 exc Fed Sec

Pollutant: Miscelaneous Continuous Data Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
140	Carbon Monoxide 27th & Montana Billings	10.20	15.90	19.20	2.306	3	
141	10th Ave South Great Falls			***			
142	Alpine West Butte	8.00	12.50	14.00	1.311	3	
144	Malfunction Jct Missoula			*			
	Lion's Park Missoula	9.50	9.50	9.50	1.821	2	
	Hydrocarbons						
140	27th & Montana Billings	7.50	11.40	26.40	4.087	3	
144	Lion's Park Missoula			***			
	Nitrogen Dioxide						
140	27th and Montana Billings	0.02	0.17	0.18	0.037	3	
144	Lion's Park Missoula			***			

Pollutant: Miscelaneous Continuous Data Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Ozone						
140	27th & Montana Billings	0.12	0.12	0.12	0.017	3	
144	Lion's Park Missoula			***			
	Sulfur Dioxide						
140	27th & Montana Billings	0.03	0.17	0.20	0.003	3	
	Laurel Farm Billings	0.40	0.66	0.66	0.057	3	4 exc.Nat.24-hr
142	East Stack E. Helena			***			
	Microwave E. Helena			***			
	Broady Ranch E. Helena			***			
	C-Hill Anaconda			***			
	Hiway Junction Anaconda	2.00	2.00	2.00	0.092	3	
	Post Office Anaconda	0.95	0.95	1.05	0.018	3	1 exc.Nat.3-hr
	Mill Creek Anaconda			***			

* - site no longer in operation - analyzer moved to Lion's Park Site

**- no valid samples received for March.

*** data not available at time of report.